Michigan Department of
AGRICULTURE
& Rural Development

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Fiscal Year 2011, Annual Report

Michigan Bovine Tuberculosis Eradication Program
Fiscal Year 2011 End of Year Report
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Program Summary

The goal of the Michigan Bovine Tuberculosis (TB) Eradication Program is to eradicate bovine tuberculosis (TB) from the cattle and white-tailed deer populations. Michigan faces a great challenge in attaining this goal because of the reservoir of infection that exists in the free-ranging white-tailed deer. A combination of slaughter (passive) and live animal (active) testing are currently used for surveillance in cattle herds in both the Modified Accredited Zone (MAZ) and Modified Accredited Advanced Zone (MAAZ) of Michigan. Examination and laboratory testing of suspect deer submitted by hunters during regular and special harvest seasons is used for surveillance in the wildlife population. Michigan currently has three bovine tuberculosis status areas: TB Free status in the Upper Peninsula and in 57 counties of the Lower Peninsula, MAAZ status in seven counties of Northern Lower Michigan, and MAZ status in four counties of Northeastern Lower Michigan. .

1. Michigan Cattle Population

Table 1. Cattle Population by Herd Type within the MAZ*

Herd Type	Number of Herds	Number of Animals
Beef	421	8,674
Dairy	107	10,421
Total	528	19,095

* Data generated from the USAHerds database 10/10/2011.
* Does not include freezer beef herds or cattle less than 12 months of age.
*MAZ as of September 30, 2011 (Alcona, Alpena, Montmorency, and Oscoda counties)

Table 2. Cattle Population by Herd Type within the MAAZ*

Herd Type	Number of Herds	Number of Animals
Beef	614	8,443
Dairy	79	4,022
Total	693	12,465

* Data generated from the USAHerds database 10/10/2011.
* Does not include freezer beef herds or cattle less than 18 months of age.
*MAAZ as of September 30, 2011 (Antrim, Charlevoix, Cheboygan, Crawford, Emmet, Otsego, and Presque Isle counties)

Table 3. Cattle Population by Herd Type within the TB Free Zone*

Herd Type	Number of Herds	Number of Animals
Beef	10,778	849,938
Dairy	2,811	595,393
Total	13,589	1,445,331

* Data taken from 2007 Census of Agriculture

2. Bovine TB Surveillance

Disease surveillance in Michigan is conducted through annual whole herd testing of cattle herds, targeted surveillance testing in the MAAZ and TB Free Zones, federal inspection of cattle at USDA FSIS inspected plants within Michigan and other states, and TB testing of cattle before movement from a farm in the MAZ.

Table 4. Michigan MAZ Caudal Fold Tuberculosis Whole Herd Testing: FY 2011*

	Number of herds	Number of tests
Total	574	17, 823

* Data generated from the USAHerds database 10/14/2011.

Table 5. Michigan MAAZ Caudal Fold Tuberculosis Whole Herd Testing: FY 2011*

	Number of herds	Number of tests
Total	412	11,464

* Data generated from the USAHerds database 10/14/2011.

Table 6. Michigan TB Free Zone Caudal Fold Tuberculosis Whole Herd Testing: FY 2011*

	Number of herds	Number of tests
Total	723	14, 060

* Data generated from the USAHerds database 10/17/2011.

Michigan completed the last part of the USDA approved risk-based surveillance plan during the first quarter of fiscal year 2011. This surveillance plan included testing in the MAZ, MAAZ, and TB Free areas of Michigan as outlined in the *Memorandum of Understanding between Michigan Department of Agriculture and the Michigan Department of Natural Resources and the United States Department of Agriculture Animal And Plant Health Inspection Service Veterinary Services.*

Please note: Any farms not in compliance with surveillance requirements are handled according to MDARD Compliance and Enforcement Policies

3. Slaughter Surveillance – Inspected Plants within Michigan*

Slaughter surveillance is conducted by examination of cattle that are presented for slaughter at USDA Food Safety Inspection Services (FSIS) inspected plants in Michigan and throughout the United States. The Michigan Bovine Tuberculosis Eradication Program has a requirement that all cattle moved from premises must have official Radio Frequency Identification (RFID) ear tags. Slaughter plants throughout the United States, receiving the majority of Michigan slaughter cattle, have RFID readers that download information on the RFID numbers seen at the plant. These numbers match MDARD's tracking program USAHerds, which is a database that tracks movement, bovine TB testing, and compliance. The total number of these scans estimates the number of Michigan cattle slaughtered at each location.

A conservative estimate of the number of cattle that underwent slaughter examination during this reporting period from the MAZ can be determined by evaluating the number of movement certificates that were issued to four (4) federally inspected slaughter plants, two (2) major slaughter cattle buyers that purchase in this area, and one (1) major saleyard that receives cattle from the MAZ for re-permitting. The estimates are as follows:

Table 7. Number of cattle sold for slaughter FY 2011*

MAZ	1,101
MAAZ	920
Northern MI Livestock Association – both MAZ and MAAZ	7,581
TOTAL	**9,602**

*Data generated from the USAHerds Database

There is one federally inspected slaughter plant in Michigan (no state meat inspection is performed). The Michigan Area office of USDA APHIS VS had two contract employees stationed at the Michigan plant to ensure adequate inspection of carcasses and assist with identification, collection, and submission of samples for tuberculosis and brucellosis testing. Their primary responsibility was collection of blood samples for the brucellosis program.

This plant inspected 197,268 cattle from October 1, 2010 through September 30, 2011. Approximately 20 percent of the cattle entering this plant are of Michigan origin. The plant submitted 298 granulomas for a granuloma submission rate of 311percent. No tuberculosis positive cattle were found during slaughter inspection.

4. Bovine TB Response Summary

TB Infected Herds

Two beef cattle herds were diagnosed as infected with TB in the MAZ during this reporting period.

Table 8. Fiscal Year 2011 – Date and Location of TB positive herds

Type of Herd	County	Zone	Date Diagnosed Infected	Status
Beef	Alpena	MAZ	March 8, 2011	Depopulated
Beef	Alpena	MAZ	April 12, 2011	Depopulated

One previously infected dairy herd and one previously infected beef herd in the MAZ remain quarantined on test-and-removal programs.

No TB infected herds were identified in the MAAZ or TB Free zones of Michigan.

Trace Investigations

For the infected herds identified during FY 2011, 60 trace investigations involving 118 animals were initiated. No TB infected herds were identified through these trace investigations.

Efforts to Improve Area Surveillance

A program to improve surveillance for bovine tuberculosis in custom slaughter facilities was implemented in October 2011. Either MDARD or USDA field personnel visited approximately 100 custom cattle slaughter plants in Michigan. Field personnel discussed how to examine a cattle carcass for tuberculosis lesions, collecting any possible lesions and reporting of the findings, and collection and submission of all RFID

tags for submission to MDARD. Two color posters are left with the operator for reference.

5. Report on Additional Activities

Efforts to Eradicate Bovine TB from Free-Ranging White-Tailed Deer
Wildlife surveillance in the MAZ of Michigan (of wild white-tailed deer) is largely accomplished via hunter-killed surveillance. The statistics are based on the previous year's submissions which were examined during the hunting season. The head lymph nodes were visually examined and any visible lesions were submitted for laboratory testing. From this surveillance effort, 25 total TB positive deer were found (1.8 percent apparent prevalence in DMU 452).

Compliance Activities
The Agricultural Inspection Station located at the Mackinac Bridge conducted 2,467 inspections of livestock vehicles from October 2010 through September 2011. These inspections included a total of 33,627 head of cattle, and 4,415 head (13 percent) went to farms in the Upper Peninsula's TB Accredited Free Zone. The station reported 29,212 head (87 percent) of cattle crossed the bridge for slaughter purposes. A total of 1,899 hours of law enforcement patrol was conducted to intercept 30 vehicles driving by the inspection station. No cases of illegal transportation of cattle were discovered in the intercepted vehicles.

Mobile patrol surveillance of livestock vehicles in the MAZ and near the MAZ / MAAZ border included 873 hours of surveillance. During this time, 127 vehicles were stopped. Two (2) violations of failure to obtain a movement certificate for cattle were found (1.6 percent of the total stops).

The Mackinac Bridge Agricultural Inspection Station was closed beginning September 10, 2011. Mobile patrols conducted around the inspection station location will be continued by the Mackinac County Sheriff's Department for an average 20 hours per week.

Bovine Tuberculosis Accredited Free Herds
There are currently 37 Bovine TB Accredited Free herds in Michigan; seven in the MAZ, 13 in the MAAZ, and 17 in the TB Free Zone. Wildlife risk mitigation inspections are being conducted twice annually by regulatory veterinarians for herds in the MAZ. One herd is currently awaiting inspection for Accredited Free status.

Mitigation of TB Transmission between Wildlife and Cattle in the MAZ
The Wildlife Risk Mitigation Project (WRMP) is a cooperative three-year project between the Michigan Department of Agriculture and Rural Development (MDARD), United States Department of Agriculture (USDA), Michigan State University (MSU) Extension, and the Michigan Milk Producers Association (MMPA). These partners provide producers with technical assistance in developing a Wildlife Risk Mitigation Action Plan (WRMAP) for their farms.

The last year (Round 3) of the WRMP began in December 2010. Unlike the first two rounds which were initiated by a series of educational meetings conducted by MSU Extension and MDA staff, the decision was made to focus on having the field staff

directly call producers who had not signed up during the first two rounds in order to speak to them individually about the Wildlife Risk Mitigation Project and the regulatory impacts of not being verified as Wildlife Risk Mitigated.

Producers were informed that all cattle farmers in the Modified Accredited Zone (MAZ) and Modified Accredited Advanced Zone (MAAZ) will need to have implemented a Wildlife Risk Mitigation Action Plan that meets MDARD standards on their farm by January 1, 2012 in order to have their customers exempted from post-movement TB testing. Additionally, in the MAAZ, owners of non-mitigated farms are responsible to contract with private veterinarians at their own expense for movement testing, whereas farms that are verified as being Wildlife Risk Mitigated are not required to movement test their animals.

Customers of farmers who do not have a verified Wildlife Risk Mitigation Action Plan for their farm will be responsible for a post-movement test of all non-mitigated cattle they purchase. As a result of these contacts 187 cattle producers have requested to have a wildlife risk assessment completed during Round 3. Cumulatively, since 2009, 811 farms have been verified by the MDARD as being Wildlife Risk Mitigated.

The WRMP program focuses on the following risk areas:

1. How cattle are fed
    - Where cattle are fed – including where salts and minerals are fed
    - How often cattle are fed
    - How much cattle are fed
2. How cattle feed is stored
3. How water is provided to cattle

MDARD has worked with the Alpena Conservation district to provide targeted cost-share assistance for cattle feed storage facilities (fences or hoop barns) in the MAZ since 2008. To date MDARD has provided over a million dollars in funding, as well as on-farm technical assistance. To date MDARD has helped fund 53 hoop barns and four cattle feed enclosures. During the summer of 2011 Congress provided $1.5 million dollars to USDA's Natural Resources Conservation Service (NRCS) to help with wildlife risk mitigation efforts in the MAZ and MAAZ.